

**TRANSFECTION, STORAGE AND TRANSFER OF MALE GERM CELLS FOR
GENERATION OF TRANSGENIC SPECIES & GENETIC THERAPIES**

ABSTRACT OF THE DISCLOSURE

A composition for in vivo transfection of vertebrate male germ cells comprises a
5 nucleic acid or transgene, and a gene delivery system, and optionally a protective
internalizing agent, such as an endosomal lytic agent, a virus or a viral component, which is
internalized by cells along with the transgene and which enhances gene transfer through the
cytoplasm to the nucleus of the male germ cell. A pharmaceutical preparation and a transfer
kit utilize the composition. A method for introducing a polynucleotide into vertebrate male
germ cells comprises the administration of the composition to a vertebrate. A method for
isolating or selecting transfected cells utilizes a reporter gene, and a method for
10 administering transfected male germ cells utilizes male germ cells which have been
transfected in vitro.